



## Overview

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FreeZone 12 Liter Console Freeze Dryers are designed for lyophilizing moderate to large sample loads or numerous small container batches. The console features a front viewing window, interior space for a vacuum pump, and accommodation for a large tray dryer such as the FreeZone Stopping Tray Dryer (pump and tray dryer sold separately).

The upright stainless steel collector coil holds 12 liters of ice before defrosting. A single 1 hp HCFC/CFC-free refrigeration system cools the collector to -50° C (-58° F), suitable for aqueous samples.

**Lyo-Works™ OS** provides a real time display of collector temperature, vacuum level and optional End-Zone™ end point detection system, shown on a 5" full color, capacitive touch screen. Models with PTFE-coated collectors that can withstand corrosive compounds are available. Built-in options include a purge valve and mini chamber.

**Catalog Number:** 701211210

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*Vacuum pump, drying accessory and freeze dry glassware (if not bulk freeze drying) are required (not included).*

## Specifications

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- **Weight:** 330.0 lbs
- **Weight metric:** 149.7 kg
- **Dimensions:** 31.8" w x 29.6" d x 36.6" h
- **Dimensions metric:** 80.7 w x 75.1 d x 92.9 h cm
- **Electrical:** 230V, 60 Hz, 9A
- **Region:** International, U.S. and Canada
- **Collector Temperature:** -50° C, -58° F
- **Conformance:** CAN/CSA C22.2, UL
- **Ice Holding Capacity:** 12L
- **Options Included:** Mini Chamber, Purge Valve
- **Plug Type:** North America, 230V
- **Style:** Console
- **Vacuum Pump Displacement Required:** 98 L/min or larger displacement

# Description

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## Features (All Models)

- Upright stainless steel collector coil capable of holding 12L of ice before defrosting. Acrylic collector lid, 3/4" thick, has neoprene gasket.
- Console cabinet with interior space for vacuum pump (sold separately) and two-piece, removable front panel with viewing window.
- Clear acrylic chamber lid, 3/4" thick, with neoprene gasket.
- Brushed stainless steel and glacier white, powder-coated steel exterior with blue accents.
- Full color, 5" capacitive touch screen with Lyo-Works™ OS:
  - Real time display of collector temperature, vacuum level, and optional End-Zone™ end point detection system.
  - Start-up mode for collector cool-down and vacuum pull-down (automatic or manual).
  - Operating mode (standby or run).
  - Vacuum set point, alerts, diagnostic tests, user manual, defrost control, and optional drying accessory parameters.
  - Data logging stores and displays data in table or chart format, and may be exported via USB or Ethernet.
  - Settings include language (English, Spanish, French, German, or Italian), time, time zone, temperature (° C or ° F), and vacuum (mBar, Torr, or Pa).
  - Alerts are programmable to send via Ethernet connection to user-entered email addresses.
  - Display settings include brightness, touch sounds (on/off), and screen time out in minutes (on/off).
  - Maintenance alert settings include vacuum pump oil change, refrigeration cleaning, total operating hours and line voltage offset.
  - Level-specific security lock-out prevents changes to programs and other system parameters.
- Hot gas defrost with auto shut off at +60° C (+140° F).
- On/standby switch.
- Moisture sensor that prevents refrigeration or vacuum start-up when moisture is detected in the drain line.
- Vacuum control valve that maintains vacuum level set point.
- Vacuum break valve that bleeds air into the system when power to the freeze dryer or vacuum pump is shut off. If a power outage less than approximately 5 minutes occurs, the freeze dryer will restart and the refrigeration and vacuum system will resume operation once power is restored. If the power failure is more than approximately 5 minutes and the collector warms above safe limits, the freeze dryer will not automatically restart.
- Side-mounted USB port and rear-mounted Ethernet connection.
- Front-mounted, quick-disconnect drain hose fitting and side-mounted lanyard with hose connector. 18", 1/4" ID silicone tubing and clamp included.
- Internal electrical receptacle for vacuum pump connection.
- 3-wire electrical cord with plug.
- 3/4" OD vacuum connection, 36" of 3/4" ID vacuum hose and two clamps.

## Options Include

- PTFE-coated collector coil and chamber for processing involving corrosive compounds.
- Purge valve for isolating the vacuum pump from the freeze dryer.
- Built-in stainless steel mini vacuum drying chamber that includes 50-watt heater with microprocessor control to +60° C (+140° F), 3/4" thick clear acrylic lid and neoprene gasket. (Chamber is not cooled.)
- Region-specific electrical plug configurations.

## Required Accessories (Not Included)

- Vacuum pump with a displacement of at least 98 L/min, 0.002 mBar ultimate pressure and fitting suitable for 3/4" ID vacuum hose.

- Tray dryer or other drying accessory.
- Freeze dry glassware if not bulk freeze drying.

## For Product Assistance

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